DECISION DOCUMENT
NATIONWIDE PERMIT 27

This document discusses the factors considered by the Corps of Engineers (Corps) during the issuance process for this Nationwide Permit (NWP). This document contains: (1) the public interest review required by Corps regulations at 33 CFR 320.4(a)(1) and (2); (2) a discussion of the environmental considerations necessary to comply with the National Environmental Policy Act; and (3) the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230). This evaluation of the NWP includes a discussion of compliance with applicable laws, consideration of public comments, an alternatives analysis, and a general assessment of individual and cumulative impacts, including the general potential effects on each of the public interest factors specified at 33 CFR 320.4(a).

1.0 Text of the Nationwide Permit

Aquatic Habitat Restoration, Establishment, and Enhancement Activities. Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas and the restoration and enhancement of non-tidal streams and other non-tidal open waters, provided those activities result in net increases in aquatic resource functions and services.

To the extent that a Corps permit is required, activities authorized by this NWP include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms; the installation of current deflectors; the enhancement, restoration, or establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels and drainage ditches; the removal of existing drainage structures; the construction of small nesting islands; the construction of open water areas; the construction of oyster habitat over unvegetated bottom in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

This NWP authorizes the relocation of non-tidal waters, including non-tidal wetlands and streams, on the project site provided there are net increases in aquatic resource functions and services.

Except for the relocation of non-tidal waters on the project site, this NWP does not authorize the conversion of a stream or natural wetlands to another aquatic habitat type (e.g., stream to wetland or vice versa) or uplands. This NWP does not authorize stream channelization. This NWP does not authorize the relocation of tidal waters or the conversion of tidal waters,

including tidal wetlands, to other aquatic uses, such as the conversion of tidal wetlands into open water impoundments.

Reversion. For enhancement, restoration, and establishment activities conducted: (1) In accordance with the terms and conditions of a binding wetland enhancement, restoration, or establishment agreement between the landowner and the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the National Marine Fisheries Service (NMFS), the National Ocean Service (NOS), or their designated state cooperating agencies; (2) as voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) on reclaimed surface coal mine lands, in accordance with a Surface Mining Control and Reclamation Act permit issued by the OSM or the applicable state agency, this NWP also authorizes any future discharge of dredged or fill material associated with the reversion of the area to its documented prior condition and use (i.e., prior to the restoration, enhancement, or establishment activities). The reversion must occur within five years after expiration of a limited term wetland restoration or establishment agreement or permit, and is authorized in these circumstances even if the discharge occurs after this NWP expires. The five-year reversion limit does not apply to agreements without time limits reached between the landowner and the FWS, NRCS, FSA, NMFS, NOS, or an appropriate state cooperating agency. This NWP also authorizes discharges of dredged or fill material in waters of the United States for the reversion of wetlands that were restored, enhanced, or established on prior-converted cropland that has not been abandoned or on uplands, in accordance with a binding agreement between the landowner and NRCS, FSA, FWS, or their designated state cooperating agencies (even though the restoration, enhancement, or establishment activity did not require a section 404 permit). The prior condition will be documented in the original agreement or permit, and the determination of return to prior conditions will be made by the Federal agency or appropriate state agency executing the agreement or permit. Before conducting any reversion activity the permittee or the appropriate Federal or state agency must notify the district engineer and include the documentation of the prior condition. Once an area has reverted to its prior physical condition, it will be subject to whatever the Corps Regulatory requirements are applicable to that type of land at the time. The requirement that the activity result in a net increase in aquatic resource functions and services does not apply to reversion activities meeting the above conditions. Except for the activities described above, this NWP does not authorize any future discharge of dredged or fill material associated with the reversion of the area to its prior condition. In such cases a separate permit would be required for any reversion.

Reporting: For those activities that do not require pre-construction notification, the permittee must submit to the district engineer a copy of: (1) The binding wetland enhancement, restoration, or establishment agreement, or a project description, including project plans and location map; (2) the NRCS or USDA Technical Service Provider documentation for the voluntary wetland restoration, enhancement, or establishment action; or (3) the SMCRA permit issued by OSM or the applicable state agency. These documents must be submitted to

the district engineer at least 30 days prior to commencing activities in waters of the United States authorized by this NWP.

Notification. The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27), except for the following activities:

(1) Activities conducted on non-Federal public lands and private lands, in accordance with the terms and conditions of a binding wetland enhancement, restoration, or establishment agreement between the landowner and the U.S. FWS, NRCS, FSA, NMFS, NOS, or their designated state cooperating agencies;

(2) Voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or

(3) The reclamation of surface coal mine lands, in accordance with an SMCRA permit issued by the OSM or the applicable state agency.

However, the permittee must submit a copy of the appropriate documentation. (Sections 10 and 404)

Note: This NWP can be used to authorize compensatory mitigation projects, including mitigation banks and in-lieu fee programs. However, this NWP does not authorize the reversion of an area used for a compensatory mitigation project to its prior condition, since compensatory mitigation is generally intended to be permanent.

1.1 Requirements

General conditions of the NWPs are in the Federal Register notice announcing the issuance of this NWP. Pre-construction notification requirements, additional conditions, limitations, and restrictions are in 33 CFR part 330.

1.2 Statutory Authority

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 404 of the Clean Water Act (33 U.S.C. 1344)

1.3 Compliance with Related Laws (33 CFR 320.3)

1.3.1 General

NWPs are a type of general permit designed to authorize certain activities that have minimal adverse effects on the aquatic environment and generally comply with the related laws cited in 33 CFR 320.3. Activities that result in more than minimal adverse effects on the aquatic

environment, individually or cumulatively, cannot be authorized by NWPs. Individual review of each activity authorized by an NWP will not normally be performed, except when preconstruction notification to the Corps is required or when an applicant requests verification that an activity complies with an NWP. Potential adverse impacts and compliance with the laws cited in 33 CFR 320.3 are controlled by the terms and conditions of each NWP, regional and case-specific conditions, and the review process that is undertaken prior to the issuance of NWPs.

The evaluation of this NWP, and related documentation, considers compliance with each of the following laws, where applicable: Sections 401, 402, and 404 of the Clean Water Act; Section 307(c) of the Coastal Zone Management Act of 1972, as amended; Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the National Environmental Policy Act of 1969; the Fish and Wildlife Act of 1956; the Migratory Marine Game-Fish Act; the Fish and Wildlife Coordination Act, the Federal Power Act of 1920, as amended; the National Historic Preservation Act of 1966; the Interstate Land Sales Full Disclosure Act; the Endangered Species Act; the Deepwater Port Act of 1974; the Marine Mammal Protection Act of 1972; Section 7(a) of the Wild and Scenic Rivers Act; the Ocean Thermal Energy Act of 1980; the National Fishing Enhancement Act of 1984; and the Magnuson-Stevens Fishery and Conservation and Management Act. In addition, compliance of the NWP with other Federal requirements, such as Executive Orders and Federal regulations addressing issues such as floodplains, essential fish habitat, and critical resource waters is considered.

1.3.2 Terms and Conditions

Many NWPs have notification requirements that trigger case-by-case review of certain activities. Two NWP general conditions require case-by-case review of all activities that may adversely affect Federally-listed endangered or threatened species or historic properties (i.e., general conditions 17 and 18). General condition 15 restricts the use of NWPs for activities that are located in Federally-designated wild and scenic rivers. None of the NWPs authorize artificial reefs. General condition 24 prohibits the use of an NWP with other NWPs, except when the acreage loss of waters of the United States does not exceed the highest specified acreage limit of the NWPs used to authorize the single and complete project.

In some cases, activities authorized by an NWP may require other federal, state, or local authorizations. Examples of such cases include, but are not limited to: activities that are in marine sanctuaries or affect marine sanctuaries or marine mammals; the ownership, construction, location, and operation of ocean thermal conversion facilities or deep water ports beyond the territorial seas; activities that result in discharges of dredged or fill material into waters of the United States and require Clean Water Act Section 401 water quality certification; or activities in a state operating under a coastal zone management program approved by the Secretary of Commerce under the Coastal Zone Management Act. In such cases, a provision of the NWPs states that an NWP does not obviate the need to obtain other authorizations required by law. [33 CFR 330.4(b)(2)]

Additional safeguards include provisions that allow the Chief of Engineers, division engineers, and/or district engineers to: assert discretionary authority and require an individual permit for a specific activity; modify NWPs for specific activities by adding special conditions on a case-by-case basis; add conditions on a regional or nationwide basis to certain NWPs; or take action to suspend or revoke an NWP or NWP authorization for activities within a region or state. Regional conditions are imposed to protect important regional concerns and resources. [33 CFR 330.4(e) and 330.5]

1.3.3 Review Process

The analyses in this document and the coordination that was undertaken prior to the issuance of the NWP fulfill the requirements of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, and other acts promulgated to protect the quality of the environment.

All NWPs that authorize activities which may result in discharges of dredged or fill material into waters of the United States require water quality certification. NWPs that authorize activities within, or affecting land or water uses within a state that has a Federally-approved coastal zone management program, must also be certified as consistent with the state's program. The procedures to ensure that the NWPs comply with these laws are described in 33 CFR 330.4(c) and (d), respectively.

1.4 Public Comment and Response

For a summary of the public comments received in response to the September 26, 2006, Federal Register notice, refer to the preamble in the Federal Register notice announcing the reissuance of this NWP. The substantive comments received in response to the September 26, 2006, Federal Register notice were used to improve the NWP by changing NWP terms and limits, notification requirements, and/or NWP general conditions, as necessary.

We proposed to modify this NWP by requiring reporting to the district engineer for those activities that do not require pre-construction notification. We also proposed to add shellfish seeding to the list of examples of activities authorized by this NWP, and remove the restriction limiting the use of this NWP only to those mitigation banks that have been approved in accordance with the 1995 mitigation banking guidelines. In addition, we proposed to prohibit the use of the NWP to authorize the conversion of natural wetlands.

We have modified the first paragraph of this NWP to more clearly present the general categories of authorized activities.

One commenter supported the broadening of the title of this NWP to include all aquatic habitats. One commenter said that this NWP has the potential to authorize projects with significant adverse impacts. One commenter said that this NWP should be revoked, because it could result in losses of wetland function and habitat and other adverse impacts to the

aquatic environment. One commenter stated that there should be an acreage limit on this NWP. Two commenters said that wetland impacts should be limited to 2 acres, and another commenter stated that stream impacts should be limited to 2,000 linear feet. Another commenter stated that the lack of an acreage limit on this NWP does not encourage applicants to minimize adverse impacts. This commenter suggested a 1/2 acre limit for wetland fills and a 300 linear foot limit for stream impacts.

This NWP authorizes aquatic habitat restoration, establishment, and enhancement activities, provided those activities result in net increases in aquatic resource functions and services. Its use will not cause significant adverse effects on the overall aquatic environment. We do not believe there should be an acreage limit on this NWP, because of the requirement for these projects to result in net increases in aquatic resource functions and services. Moreover, all activities authorized under this NWP will be reviewed in advance by the Corps, either through the pre-construction notification requirement, or through the reporting requirement for projects conducted under authorities of other Federal agencies.

One commenter recommended prohibiting establishment of open water areas in existing wetlands and streams, and prohibiting the relocation of all aquatic resources. One commenter recommended removing the references to waterfowl impoundments because those impoundments may be considered enhancements by some people. This commenter said the establishment of impoundments in streams or natural wetlands should not be allowed for any reason. One commenter requested clarification whether this NWP authorizes green-tree reservoirs. One commenter suggested allowing dam removal activities to be authorized by this NWP. One commenter said that this NWP should authorize stream establishment, in cases where impaired or degraded streams can be relocated to provide net benefits to the aquatic environment and the overall watershed.

We have modified the text of this NWP, by removing the reference to establishing an impoundment for wildlife habitat. This NWP does not authorize green-tree reservoirs, because those activities generally degrade natural wetlands and would not result in a net increase in aquatic resource functions and services. Discharges of dredged or fill material into waters of the United States for the continued operation of existing green-tree reservoirs may be authorized by NWP 30. New green-tree reservoirs may be authorized by individual permits or regional general permits. This NWP prohibits the conversion of streams or natural wetlands to other aquatic habitat types or uplands, except for the relocation of non-tidal waters on the project site. We have also simplified the language regarding the relocation of non-tidal waters, including non-tidal wetlands, on the project site. The requirement that such relocations provide net gains in aquatic resource functions and services has been retained. Dam removal activities can be authorized by this NWP, provided they meet the requirements for its use, including that there is a net increase in aquatic resource functions and services. We have modified the third paragraph of this NWP to state that this NWP can be used to authorize the relocation of non-tidal streams, provided there are net increases to aquatic resource functions and services.

One commenter stated that using this NWP to authorize the relocation of non-tidal waters,

including non-tidal wetlands, on the project site as long as there are net gains in aquatic resource functions and services, appears to contradict the provision prohibiting the conversion of streams or natural wetlands to another aquatic use. This commenter indicated that there will be different interpretations of the relative value of certain aquatic resource functions and services. This commenter also said that temporal lags associated with replacing certain wetland types, such as forested wetlands, should be considered.

The relocation of non-tidal waters on a project site does not necessarily contradict the provision prohibiting the conversion of streams or natural wetlands to another aquatic habitat type, if comparable streams or wetlands are restored or established elsewhere on the project site. District engineers will determine compliance with these provisions on a case-by-case basis, in response to a pre-construction notification or a report. We recognize that relocating non-tidal waters may result in temporal losses of certain aquatic resource functions and services, while the relocated waters undergo ecosystem development. To comply with these provisions of this NWP, the net increases in aquatic resource functions and services does not need to occur immediately after the NWP 27 activity has been constructed. However, those net increases need to occur over time through ecosystem development processes as a result of a successful aquatic habitat restoration, establishment, or enhancement activity.

Two commenters noted that conversion of streams or wetlands to other aquatic uses is prohibited but conversions of waters to uplands are not prohibited. Three commenters supported the proposed language prohibiting conversion of streams or natural wetlands to other aquatic uses. Another commenter supported the language prohibiting conversion of wetlands to other aquatic uses, but said that it may limit the usefulness of this NWP, as it will not be able to authorize large ecosystem restoration projects that involve conversions of wetlands to other aquatic types, even where there are net benefits for the aquatic environment.

We have modified this NWP to prohibit the conversion of streams or natural wetlands to uplands. This prohibition does not apply to projects involving the relocation of non-tidal waters on the project site, as long as those activities result in net increases in aquatic resource functions and services. Large ecosystem restoration projects that involve conversions of aquatic habitat to other aquatic uses are more appropriately authorized through either regional general permits or individual permits.

To prevent re-arrangement of wetlands within a single development tract, one commenter asked that this NWP prohibit the relocation of aquatic habitat types on parcels where a local planning document exists for the development. One commenter objected to prohibiting the conversion of natural wetlands to other aquatic uses on the grounds that NWPs are intended to allow any activities with minimal adverse effects. This commenter stated that some conversions enhance ecosystem functions.

This NWP can be used to authorize relocation of aquatic habitats on a project site, even those with development activities, provided there are net gains in aquatic resource functions

and services. These activities can be beneficial in cases where the development activity could have indirect adverse effects on the functions of existing aquatic resources on the project site, and where relocating those aquatic resources would result in enhanced ecosystem functions. We have revised the text of this NWP to prohibit the conversion of natural wetlands to other uses, unless that conversion is part of relocating non-tidal waters on the project site. This NWP does not authorize stream channelization, which often involves extensive armoring and straightening of stream channels.

One commenter suggested allowing the use of NWP 27 for the restoration and enhancement of tidal streams and tidal open waters. Another commenter said that this NWP should authorize the relocation and/or conversion of any tidal waters, provided the proposed work would result in net increases in aquatic resource functions and services. One commenter stated that this NWP should not authorize the construction of impoundments or partial impoundments in tidal wetlands or estuarine waters.

This NWP does not authorize the restoration of tidal streams and tidal open waters, but may authorize the restoration of riparian areas next to such waters. The restoration of tidal streams and other tidal open waters that involve more than restoring riparian areas is more appropriately authorized by other Department of the Army permits, since those activities may result in more than minimal adverse effects on the aquatic environment. We do not believe it would be appropriate to modify this NWP to authorize those activities. We maintain our position that this NWP should not authorize the relocation or conversion of tidal waters. Those activities may be authorized by individual permits or regional general permits. This NWP does not authorize the conversion of tidal waters to other uses, such as impoundments or partial impoundments.

One commenter said that many activities proposed as restoration actually degrade habitat or result in a net loss of habitat, and stated that pre-construction notification should be required for all activities authorized by this NWP, to determine the beneficial effects and whether the activity is protective of tribal resources.

Pre-construction notification is required for activities authorized by this NWP, except for those activities conducted in accordance with binding agreements between certain Federal agencies or their designated state cooperating agencies, voluntary wetland activities documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards, or the reclamation of surface coal mining lands, in accordance with permits issued by the Office of Surface Mining or the applicable state agency. For those activities that do not require pre-construction notification, reporting to the district engineer is required. In the latter cases, the district engineer can review the documentation provided through reporting to ensure that the activity qualifies for NWP authorization. The reporting requirements provide district engineers with the opportunity to review aquatic habitat restoration, establishment, and enhancement activities conducted under the purview of other government entities, to ensure that those activities result in net increases in aquatic resource functions and services. The pre-construction notification requirements, as well as the reporting requirements, will help ensure that this NWP

authorizes only activities that comply with the terms and conditions of this NWP, including general condition 16, Tribal Rights.

One commenter stated that the reporting requirement for voluntary NRCS-related wetland projects would be burdensome, and suggested that requiring NRCS documentation could discourage voluntary wetland restoration activities. Another commenter said that there appears to be little difference between the reporting and pre-construction notification provisions, and suggested requiring pre-construction notifications for all NWP 27 activities. Two commenters supported the requirement that copies of restoration agreements be submitted. One commenter recommended requiring pre-construction notifications and interagency coordination for all projects using NWP 27, to ensure that development activities are not conducted as NWP 27 activities. A commenter objected to requiring the submittal of restoration agreements to fulfill the reporting requirement, citing privacy concerns. This commenter said that alternative types of information could be submitted instead to report proposed NWP 27 activities conducted under these agreements. One commenter stated that the Corps and other agencies should be required to approve wetland enhancement, restoration, or establishment agreements referenced in the reversion provisions of NWP 27.

The pre-construction notification requirements are sufficient to ensure proper implementation of NWP 27. We have clarified the language in the NWP to reduce confusion. To avoid duplicative efforts by the government, pre-construction notification is not required for activities conducted under agreements or arrangements with other state or Federal government agencies. Pre-construction notification is required for all other activities. The reporting requirement will provide a mechanism whereby the Corps can review proposed activities conducted under other agency programs, to ensure that they comply with the terms and conditions of this NWP. We are modifying the reporting requirement to allow the submittal of project descriptions and plans, in lieu of binding agreements executed between agencies and landowners.

It would be inappropriate to require Corps approval of wetland enhancement, restoration, or establishment agreements executed and administered by other agencies. For those activities that require pre-construction notification and will result in the loss of greater than 1/2 acre of waters of the United States, agency coordination is required (see paragraph (d) of general condition 27).

One commenter suggested modifying the reversion, reporting, and notification provisions by referencing actions documented by "NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide Standards" instead of "NRCS regulations," since many of these wetland restoration, enhancement, and establishment activities are performed by technical service providers, who must be certified by NRCS and comply with the Field Office Technical Guide standards. We concur with this recommendation, and have made appropriate changes to the text of this NWP.

One commenter said that replacing the word "values" with "services" demeans the functions

provided by a healthy ecosystem, unless the term "functions" is specifically retained. Another commenter remarked that replacing the word "values" with "services" is inconsistent with the common industry vernacular. They suggest using the word "functions" instead of "services."

We are retaining the term "functions" in the text of this NWP, and are replacing the word "values" with "services" because ecosystem services provide a more objective measure of the importance of aquatic resource functions to human populations. The terms "functions" and "services" are not equivalent, and therefore it would not be appropriate to replace the term "services" with "functions." Services are the benefits that humans derive from the functions performed by wetlands and other aquatic resources. The term "services" is now being used in place of "values" in the ecological economics literature, because of the difficulty in assigning value to ecosystem services. As discussed in the September 26, 2006, Federal Register notice, values may relate to either monetary or non-monetary measures, but services can be described in physical terms that are easier to evaluate and address, where necessary, in NWP authorization letters and special permit conditions.

Two commenters supported allowing the use of NWP 27 to authorize the construction of mitigation banks. One commenter requested clarification that this NWP could be used for wetland mitigation banks, and one commenter asked that the NWP apply to all mitigation banking projects, not just those with a signed mitigation banking agreement. Two commenters said that the construction of mitigation banks should not be authorized by NWP 27, but should be authorized by individual permits instead. One commenter stated that it would be acceptable to allow the use of NWP 27 for mitigation bank construction with a caveat that impacts associated with mitigation bank construction be deducted from any available credit the mitigation bank develops. One commenter requested that this NWP contain language stating that compensatory mitigation is required for activities authorized by NWP 27, but another commenter suggested that no compensatory mitigation should be required for impacts associated with construction of compensatory mitigation projects.

This NWP can be used to authorize aquatic resource restoration, establishment, and enhancement activities necessary for the construction of mitigation banks. It is not necessary for the mitigation bank proponent to obtain a signed mitigation banking instrument prior to conducting the NWP 27 activity, but the mitigation bank proponent needs to understand that activities conducted prior to approval of a banking instrument may or may not be approved in any final instrument. The Corps thus recommends that construction of mitigation banks not begin until a final instrument has been signed. Requiring compensatory mitigation for losses of waters of the United States as a result of NWP 27 is at the discretion of the district engineer. The crediting of a mitigation bank will be determined by the district engineer during the approval process for the mitigation banking instrument. Any adverse impacts to aquatic resources resulting from construction of the bank would certainly be considered in that determination.

Two commenters said that this NWP should require permittees to plant native species at the site. They said that the proposed language contains too much flexibility. One commenter

said that NWP 27 should not authorize activities in waters inhabited by anadromous fish. One commenter stated that the U.S. Fish and Wildlife Service must concur with projects in which machinery must work in waters where endangered or threatened species are present. One commenter indicated that this NWP should authorize work in flowing waters where the activity will result in long-term stability and habitat benefits.

It would be inappropriate to require permittees to plant only native species at the project site. Native plant materials may not be available for all of these projects, and it is difficult to define precisely what constitutes a "native" species. The activities authorized by this NWP are required to result in net increases in aquatic resource functions and services, which should benefit anadromous fish species. However, district engineers will review pre-construction notifications and other reported activities to determine if the proposed aquatic habitat restoration, establishment, or enhancement activity would have more than minimal adverse effects on anadromous fish species, or require consultation under Section 7 of the Endangered Species Act. In addition, division and district engineers can develop regional conditions or case-specific conditions to ensure that potential impacts to anadromous fish are minimal, or exercise discretionary authority to require an individual permit for the work if impacts are expected to be more than minimal. Compliance with the other general conditions for the NWPs, including general condition 9, Management of Water Flows, is required, though general condition 9 specifically allows activities that alter the pre-construction course, condition, capacity, and location of open waters if they benefit the aquatic environment.

One commenter requested clarification of what constitutes a "small" nesting island, and requested that the NWP state that approved water quality standards cannot be violated during construction of small nesting islands. Another commenter said that pre-construction notification should be required for the construction of small nesting islands in special aquatic sites. One commenter asked for a definition of the term "enhancement activities." One commenter suggested requiring monitoring of stream restoration projects, with mandatory corrective actions for projects that are not successful.

The district engineer has the discretion to determine what a "small nesting island" is for the purposes of this NWP. Either pre-construction notification or reporting is required for all activities authorized by this NWP, which will provide district engineers with opportunities to review all proposed activities, including the construction of small nesting islands, to determine those activities comply with the terms and conditions of the NWP. The term "enhancement" is defined in the "Definitions" section of the NWPs. District engineers have the authority to require additional monitoring or corrective measures on a case-specific basis. We believe it is unnecessary to restate those authorities in the text of this NWP.

One commenter said that this NWP should prohibit the widening or straightening of stream channels, the removal of gravel bars, the destruction of woody vegetation, and the in-stream use of bulldozing or heavy equipment. Another commenter stated that NWP 27 should require the use of natural stream channel design for in-stream work. Two commenters suggested that this NWP should not authorize the use of riprap or other armoring. One

commenter suggested limiting the use of this NWP to restoration of a stream to its historic non-degraded condition to prevent the use of this NWP for construction of flood control projects.

This NWP does not authorize stream channelization activities. It may be necessary to temporarily impact gravel bars or vegetation during the construction of stream restoration and enhancement activities. After the construction of the stream restoration or enhancement project, the stream channel should move water and sediment in a manner that will result in a channel morphology that provides habitat for a diverse community of species. That restored or enhanced habitat will include gravel bars, if the bed load carried by the stream includes a sufficient proportion of gravel. In addition riparian vegetation will normally be planted or allowed to grow back to replace the impacted riparian vegetation after construction activities have been completed. In-stream use of heavy equipment is not prohibited, because such equipment is usually necessary to conduct stream restoration and enhancement activities. In response to a pre-construction notification, or the review of the other Federal agency agreement, the district engineer will determine whether the proposed activity complies with the terms and conditions of the NWP, including the requirement for the activity to result in net increases in aquatic resource functions and services. It would be inappropriate to require, in the text of this NWP, specific design or construction methods, or prohibit the use of riprap or other armoring. Armoring using riprap or other materials can be a necessary component of beneficial aquatic habitat restoration, establishment, and enhancement projects.

We believe that limiting the use of this NWP for the sole purpose of restoring streams to historic conditions would be overly restrictive, and would effectively prohibit its use for other beneficial restoration activities. Further, the pre-construction notification and reporting requirements for this NWP will help ensure that activities conducted under this NWP comply with the purposes and intent of the NWP, as well as its terms and condition.

Two commenters said that the prohibition against stream channelization conflicts with general condition 9, Management of Water Flows, which allows stream restoration and relocation for some NWP activities. One commenter suggested that the Corps remove the channelization restriction from NWP 27 and expand the definition of "stream channelization" to authorize activities beneficial to the aquatic environment.

As noted above, general condition 9 allows the use of any NWP for projects that alter the pre-construction course, condition, capacity, and location of open waters if they benefit the aquatic environment. The removal of the stream channelization prohibition from NWP 27 could inadvertently allow projects to proceed under this NWP that have more than minimal adverse impacts on the aquatic environment. We also believe that it is unnecessary to modify the definition of stream channelization as suggested because the definition provides an accurate and concise description of what constitutes stream channelization.

One commenter recommended limiting the use of NWP 27 to projects conducted by or sponsored by state or federal agencies. One commenter recommended removing the reference to prior converted croplands.

We disagree that use of this NWP should be limited to activities conducted or sponsored by state or federal agencies, however, projects not conducted pursuant to authorities of other agencies do require a pre-construction notification. The reference to prior converted croplands in the reversion provision is necessary, since prior converted croplands are not considered to be waters of the United States (see 33 CFR 328.3(a)(8)).

One commenter suggested including a definition for shellfish seeding in the NWP. One commenter questioned whether the Corps has regulatory jurisdiction over shellfish aquaculture and restoration activities. Another commenter requested clarification whether pre-construction notification is required for shellfish seeding authorized by this NWP. One commenter recommended removing the pre-construction notification requirement for shellfish activities that have the approval of other government agencies with resource management responsibilities. Two commenters said that state natural resource agencies should be exempted from the pre-construction notification requirements if the shellfish seeding activity is done over an unvegetated bottom, since those activities are already addressed by other state and Federal permit processes. Two other commenters expressed concern that the proposed changes to the NWP would adversely affect community-based shellfish restoration efforts, including locally-based oyster restoration programs. They said that the pre-construction notification requirements, or requiring any permit for shellfish restoration, would be overly burdensome and would adversely affect community-based programs that are already operating with volunteer staffs, minimal budgets, and limited resources.

We are providing a definition of "shellfish seeding" in the "Definitions" section of the NWPs. This definition was derived from the definition provided in the preamble discussion for proposed NWP D, Commercial Shellfish Aquaculture Activities (see 71 FR 56275). Shellfish aquaculture and restoration activities require Department of the Army authorization, if they involve discharges of dredged or fill material into waters of the United States and/or structures or work in navigable waters of the United States. On-going commercial shellfish aquaculture activities may be authorized by NWP 48 and shellfish restoration activities may be authorized by NWP 27. New commercial shellfish aquiculture activities may be authorized by regional general permits or individual permits. The pre-construction notification requirement is necessary for shellfish habitat restoration activities, except those conducted under one of the other listed authorities, to ensure that those projects comply with the terms and conditions of this NWP and do not cause more than minimal adverse effects. However, the Corps does not believe that the PCN requirement is overly burdensome and it should not limit the ability of community-based programs to conduct such activities.

One commenter opposed modifying this NWP to authorize shellfish restoration activities because they believe that these projects can have more than minimal impact on benthic habitat. One commenter said that shellfish seeding should not be authorized by this NWP. Another commenter suggested that fill placement for shellfish seeding or shellfish bed preparation activities should not qualify for any NWP and should only be evaluated under

individual permit processes. Several commenters recommended that shellfish seeding should be authorized by this NWP. A number of commenters stated that shellfish seeding can be used to protect or restore valuable aquatic habitats since construction of oyster reefs has been used to attenuate wave energy as part of coastal restoration strategies.

The restoration of oyster habitat, as well as the habitat of other shellfish species, usually provides substantial benefits to the overall aquatic environment. Shellfish help improve water quality and other habitat characteristics of estuarine and marine waters. Shellfish seeding is often a necessary component of restoration activities, when the objective is to increase populations of shellfish. District engineers will review pre-construction notifications or agreements with other agencies to ensure that these activities result in minimal individual and cumulative effects on the aquatic environment and other public interest factors. In response to a pre-construction notification, the district engineer can add special conditions to the NWP authorization or exercise discretionary authority and require an individual permit.

One commenter remarked that shellfish seeding practices could be considered an aquaculture activity, and said that the requirements of NWP 27 could be a significant barrier to aquaculture development. Another commenter indicated that projects solely associated with shellfish restoration could be authorized by NWP 27, but suggested that it would be more appropriate to authorize such activities under the proposed NWP for commercial shellfish aquaculture activities. One commenter expressed concern that NWP 27 may overlap with NWP 48. One commenter stated that some oyster restoration and enhancement is done by commercial shellfishing operations that harvest only wild oysters. In some cases, shellfish husbandry or restoration is required by other regulatory agencies, and the commenter stated that neither NWP 27 nor NWP 48 allow this activity. One commenter asked if each oyster bed restoration would require a separate permit, or could an entity apply for a single permit to cover all of their shellfish restoration projects. They recommended establishing a single permit that any state natural resource agency could use at any time to eliminate the need for those agencies to obtain separate permits for numerous individual projects.

This NWP does not authorize commercial aquaculture activities. It authorizes shellfish habitat restoration activities, including shellfish seeding, that are conducted to restore populations of shellfish in navigable waters of the United States. Although these restored shellfish populations may be harvested at a later time by licensed fisherman, the objective of the activities authorized by this NWP must be to restore populations of shellfish in navigable waters of the United States. This NWP does not authorize structures or work, such as nets and anchors, that are used to reduce or eliminate predation of shellfish growing in these restored habitats. On-going commercial aquaculture activities may be authorized by NWP 48, regional general permits, or individual permits. New commercial aquaculture activities may be authorized by regional general permits or individual permits. This NWP authorizes single and complete shellfish habitat restoration activities. Regional general permits or individual permits may be issued by district engineers to authorize shellfish restoration programs.

One commenter disagreed with assertion that this NWP will encourage applicants to design their projects to be within the scope of the NWP, and said that this statement makes no sense since there are no acreage limits for this NWP. This commenter stated that the decision document fails to discuss whether replacement wetlands will successfully replace the functions provided by the impacted wetlands. This commenter also said that the 404(b)(1) Guidelines analysis fails to consider avoidance.

The conditions of this NWP requires prospective permittees to design their aquatic resource restoration, enhancement, or establishment projects to minimize adverse effects to the aquatic environment. In addition, this NWP only authorizes a subset of potential activities relating to aquatic habitat restoration, enhancement, or establishment. With the exception of relocating non-tidal waters on the project site, this NWP does not authorize the conversion of streams or natural wetlands to another aquatic use. The success of such relocations will be assessed on a case-by-case basis, to determine compliance with the requirement that such activities result in net increases in aquatic resource functions and services. General condition 20 requires permittees to avoid and minimize adverse effects to the aquatic environment to the maximum extent practicable on the project site, which is consistent with the requirements of the Section 404(b)(1) Guidelines.

2.0 Alternatives

This evaluation includes an analysis of alternatives based on the requirements of NEPA, which requires a more expansive review than the Clean Water Act Section 404(b)(1) Guidelines. The alternatives discussed below are based on an analysis of the potential environmental impacts and impacts to the Corps, Federal, Tribal, and state resource agencies, general public, and prospective permittees. Since the consideration of off-site alternatives under the 404(b)(1) Guidelines does not apply to specific projects authorized by general permits, the alternatives analysis discussed below consists of a general NEPA alternatives analysis for the NWP.

2.1 No Action Alternative (No Nationwide Permit)

The no action alternative would not achieve one of the goals of the Corps Nationwide Permit Program, which is to reduce the regulatory burden on applicants for activities that result in minimal adverse effects on the aquatic environment, individually or cumulatively. The no action alternative would also reduce the Corps ability to pursue the current level of review for other activities that have greater adverse effects on the aquatic environment, including activities that require individual permits as a result of the Corps exercising its discretionary authority under the NWP program. The no action alternative would also reduce the Corps ability to conduct compliance actions.

If this NWP is not available, substantial additional resources would be required for the Corps to evaluate these minor activities through the individual permit process, and for the public and Federal, Tribal, and state resource agencies to review and comment on the large number

of public notices for these activities. In a considerable majority of cases, when the Corps publishes public notices for proposed activities that result in minimal adverse effects on the aquatic environment, the Corps typically does not receive responses to these public notices from either the public or Federal, Tribal, and state resource agencies. Another important benefit of the NWP program that would not be achieved through the no action alternative is the incentive for project proponents to design their projects so that those activities meet the terms and conditions of an NWP. The Corps believes the NWPs have significantly reduced adverse effects to the aquatic environment because most applicants modify their projects to comply with the NWPs and avoid the delays and costs typically associated with the individual permit process.

In the absence of this NWP, Department of the Army (DA) authorization in the form of another general permit (i.e., regional or programmatic general permits, where available) or individual permits would be required. Corps district offices may develop regional general permits if an NWP is not available, but this is an impractical and inefficient method for activities with minimal individual or cumulative adverse effects on the aquatic environment that are conducted across the Nation. Not all districts would develop these regional general permits for a variety of reasons. The regulated public, especially those companies that conduct work in more than one Corps district, would be adversely affected by the widespread use of regional general permits because of the greater potential for lack of consistency and predictability in the authorization of similar activities with minimal adverse effects on the aquatic environment. These companies would incur greater costs in their efforts to comply with different regional general permit requirements between Corps districts. Nevertheless, in some states Corps districts have issued programmatic general permits to take the place of this and other NWPs. However, this approach only works in states with regulatory programs comparable to the Corps Regulatory Program.

2.2 National Modification Alternatives

Since the Corps Nationwide Permit program began in 1977, the Corps has continuously strived to develop NWPs that authorize activities that result only in minimal adverse effects on the aquatic environment, individually or cumulatively. Every five years the Corps reevaluates the NWPs during the reissuance process, and may modify an NWP to address concerns for the aquatic environment. Utilizing collected data and institutional knowledge concerning activities authorized by the Corps regulatory program, the Corps reevaluates the potential impacts of activities authorized by NWPs. The Corps also uses substantive public comments on proposed NWPs to assess the expected impacts. This NWP was developed to authorize aquatic habitat restoration, establishment, and enhancement activities that have minimal adverse effects on the aquatic environment. The Corps has considered alternative terms and applicable waters for this NWP, as well as modifying or adding NWP general conditions, as discussed in the preamble of the Federal Register notice announcing the issuance of this NWP.

In the September 26, 2006, Federal Register notice, the Corps requested comments on the proposed reissuance of this NWP. The Corps proposed to simplify the terms of this NWP

that specify the types of lands that could be used to conduct aquatic resource restoration, establishment, and enhancement activities, without altering the potential categories of users of this NWP. In addition, the Corps proposed to modify the reversion provision of this NWP, by adding the Farm Service Agency and appropriate designated state cooperating agencies that may execute agreements with landowners.

2.3 Regional Modification Alternatives

An important aspect for the NWPs is the emphasis on regional conditions to address differences in aquatic resource functions, services, and values across the nation. All Corps divisions and districts are expected to add regional conditions to the NWPs to enhance protection of the aquatic environment and address local concerns. Division engineers can also revoke an NWP if the use of that NWP results in more than minimal adverse effects on the aquatic environment, especially in high value or unique wetlands and other waters.

Corps divisions and districts also monitor and analyze the cumulative adverse effects of the NWPs, and if warranted, further restrict or prohibit the use of the NWPs to ensure that the NWPs do not authorize activities that result in more than minimal adverse effects on the aquatic environment. To the extent practicable, division and district engineers will use regulatory automated information systems and institutional knowledge about the typical adverse effects of activities authorized by NWPs, as well as substantive public comments, to assess the individual and cumulative adverse effects on the aquatic environment resulting from regulated activities. When conducting such assessments, division and district engineers can only consider those activities regulated by the Corps under Section 10 of the Rivers and Harbors Act, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972. Adverse impacts resulting from activities outside of the Corps scope of review, such as the construction or expansion of upland developments, cannot be considered in the Corps analysis of cumulative adverse effects on the aquatic environment.

2.4 Case-specific On-site Alternatives

Although the terms and conditions for this NWP have been established at the national level to authorize most activities that have minimal adverse effects on the aquatic environment, division and district engineers have the authority to impose case-specific special conditions on an NWP authorization to ensure that the authorized work will result in minimal adverse effects.

General condition 20 requires the permittee to minimize and avoid impacts to waters of the United States to the maximum extent practicable at the project site. Off-site alternatives cannot be considered for activities authorized by NWPs. During the evaluation of a pre-construction notification, the district engineer may determine that additional avoidance and minimization is practicable. The district engineer may also condition the NWP authorization to require compensatory mitigation to offset losses of waters of the United States and ensure that the net adverse effects on the aquatic environment are minimal. As another example,

the NWP authorization can be conditioned to prohibit the permittee from conducting the work during specific times of the year to protect spawning fish and shellfish. If the proposed work will result in more than minimal adverse effects on the aquatic environment, then the district engineer will exercise discretionary authority and require an individual permit. Discretionary authority can be asserted where there are concerns for the aquatic environment, including high value aquatic habitats. The individual permit review process requires a project-specific alternatives analysis, including the consideration of off-site alternatives, and a public interest review.

3.0 Affected Environment

The affected environment consists of terrestrial and aquatic ecosystems. The total land area in the contiguous United States is approximately 1,930,000,000 acres (Dahl 2006). Alaska is 366,050,000 acres in size and Hawaii is 4,110,720 acres in size (source: http://www.usgs.gov/state/ , accessed July 25, 2005). Terrestrial ecosystems comprise more than 93 percent of the contiguous United States and most are abundant compared to aquatic ecosystems, which make up the remainder (Dahl 2006). In the contiguous United States, approximately 67 percent of the land is privately owned, 31 percent is held by the United States government, and two percent is owned by state or local governments (Dale et al. 2000). Developed non-federal lands comprise 4.4 percent of the total land area of the contiguous United States (Dale et al. 2000).

The Federal Geographic Data Committee has established the Cowardin system developed by the U.S. Fish and Wildlife Service (USFWS) (Cowardin et al. 1979) as the national standard for wetland mapping, monitoring, and data reporting (Dahl 2006) (see also http://www.fgdc.gov/standards/projects/FGDC-standards-projects/wetlands/fgdc-announce , accessed April 3, 2006). The Cowardin system is a hierarchical system which describes various wetland and deepwater habitats, using structural characteristics such as vegetation, substrate, and water regime as defining characteristics. Wetlands are defined by vegetation type, soils, and flooding frequency. Deepwater habitats are permanently flooded areas located below the wetland boundary. In rivers and lakes, deepwater habitats are usually more than two meters deep.

There are five major systems in the Cowardin classification scheme: marine, estuarine, riverine, lacustrine, and palustrine (Cowardin et al. 1979). The marine system consists of open ocean on the continental shelf and its high energy coastline. The estuarine system consists of tidal deepwater habitats and adjacent tidal wetlands that are usually partially enclosed by land, but may have open connections to open ocean waters. The riverine system generally consists of all wetland and deepwater habitats located within a river channel. The lacustrine system generally consists of wetland and deepwater habitats located within a topographic depression or dammed river channel, with a total area greater than 20 acres. The palustrine system generally includes all non-tidal wetlands and wetlands located in tidal areas with salinities less than 0.5 parts per thousand; it also includes ponds less than 20 acres in size. Approximately 95 percent of wetlands in the conterminous United States are

freshwater wetlands, and the remaining 5 percent are estuarine or marine wetlands (Dahl 2006).

The Emergency Wetlands Resources Act of 1986 (Public Law 99-645) requires the USFWS to submit wetland status and trends reports to Congress (Dahl 2006). The latest status and trends report, which covers the period of 1998 to 2004, is summarized in Table 3.1.

Table 3.1. Estimated aquatic resource acreages in the conterminous United States in 2004 (Dahl 2006).

Aquatic Habitat Category	Estimated Area in 2004 (acres)
Marine	128,600
Estuarine intertidal non-vegetated	600,000
Estuarine intertidal vegetated	4,571,700
All intertidal waters and wetlands	5,300,300
Palustrine non-vegetated	6,633,900
Palustrine vegetated	95,819,800
• Palustrine emergent wetlands	26,147,000
• Palustrine forested wetlands	52,031,400
• Palustrine shrub wetlands	17,641,400
All palustrine aquatic habitats	102,453,700
Lacustrine deepwater habitats	16,773,400
Riverine deepwater habitats	6,813,300
Estuarine subtidal habitats	17,717,800
All aquatic habitats	149,058,500

The acreage of lacustrine deepwater habitats does not include the open waters of Great Lakes (Dahl 2006).

According to Hall et al. (1994), there are more than 204 million acres of wetlands and deepwater habitats in the State of Alaska, including approximately 174.7 million acres of wetlands. Wetlands and deepwater habitats comprise approximately 50.7 percent of the surface area in Alaska (Hall et al. 1994).

The National Resources Inventory (NRI) is a statistical survey conducted by the Natural Resources Conservation Service (NRCS) (2003) of natural resources on non-federal land in the United States. The NRCS defines non-federal land as privately owned lands, tribal and trust lands, and lands under the control of local and State governments. The land use determined by 2003 NRI is summarized in Table 3.2. The 2003 NRI estimates that there are 110,760,000 acres of palustrine and estuarine wetlands on non-Federal land and water areas in the United States (NRCS 2003).

Table 3.2. The 2003 National Resources Inventory acreages for palustrine and estuarine wetlands on non-federal land, by land cover/use category (NRCS 2003).

National Resources Inventory Land Cover/Use Category	Area of Palustrine and Estuarine Wetlands (acres)
cropland, pastureland, and Conservation Reserve Program land	16,730,000
forest land	65,440,000
rangeland	7,740,000
other rural land	15,800,000
developed land	1,590,000
water area	3,460,000
Total	110,760,000

The land cover/use categories used by the 2003 NRI are defined below (NRCS 2003). Croplands are areas used to produce crops adapted for harvest. Pastureland is land managed for livestock grazing, through the production of introduced forage plants. Conservation Reserve Program land is under a Conservation Reserve Program contract. Forest land is comprised of at least 10 percent single stem woody plant species that will be at least 13 feet tall at maturity. Rangeland is land on which plant cover consists mostly of native grasses, herbaceous plants, or shrubs suitable for grazing or browsing, and introduced forage plant species. Other rural land consists of farmsteads and other farm structures, field windbreaks, marshland, and barren land. Developed land is comprised of large urban and built-up areas (i.e., urban and built-up areas 10 acres or more in size), small built-up areas (i.e., developed lands 0.25 to 10 acres in size) , and rural transportation land (e.g., roads, railroads, and associated rights-of-way outside urban and built-up areas). Water areas are comprised of waterbodies and streams that are permanent open waters.

Leopold, Wolman, and Miller (1964) estimated that there are approximately 3,250,000 miles of river and stream channels in the United States. This estimate is based on an analysis of 1:24,000 scale topographic maps, by stream order. This estimate does not include many small streams. Many small streams are not mapped on 1:24,000 scale U.S. Geological Survey topographic maps (Leopold 1994) or included in other analyses (Meyer and Wallace 2001). In a study of stream mapping in the southeastern United States, only 20% of the stream network was mapped on 1:24,000 scale topographic maps, and nearly none of the observed intermittent or ephemeral streams were indicated on those maps (Hansen 2001). For a 1:24,000 scale topographic map, the smallest tributary found by using 10-foot contour interval has drainage area of 0.7 square mile and length of 1,500 feet, and smaller channels are common throughout the United States (Leopold 1994). Due to the difficulty in mapping small streams, there are no accurate estimates of the total number of river or stream miles in the conterminous United States that may be classified as "waters of the United States."

The USFWS status and trends study does not assess the condition or quality of wetlands and deepwater habitats (Dahl 2006). The Nation's aquatic resource base is underestimated by the USFWS status and trends study, the National Wetland Inventory (NWI), and studies that estimate the length or number of stream channels within watersheds (see above). The 2006 status and trends study does not include Alaska and Hawaii. The underestimate by the status and trends study and the NWI results from the minimum size of wetlands detected through remote sensing techniques and the difficulty of identifying certain wetland types through those remote sensing techniques. The NWI maps do not show small or linear wetlands (Tiner 1997) that may be directly impacted by activities authorized by NWPs. For the latest USFWS status and trends study, most of the wetlands identified are larger than 2.5 acres, but the minimum size of detectable wetland varies by wetland type (Dahl 2006). Some wetland types less than one acre in size can be identified; the smallest wetland detected for the most recent status and trends report was 0.005 acre (Dahl 2006). Because of the limitations of remote sensing techniques, certain wetland types are not included in the USFWS status and trends study: seagrass beds, submerged aquatic vegetation, submerged reefs, certain types of forested wetlands, and emergent wetlands along the Pacific coast (Dahl 2006). Therefore, activities authorized by NWPs will adversely affect a smaller proportion of the Nation's wetland base than indicated by the wetlands acreage estimates provided in the most recent status and trends report, or the NWI maps for a particular region.

Not all of the Nation's aquatic resources are subject to regulatory jurisdiction under Section 404 of the Clean Water Act. Waters of the United States subject to Section 404 of the Clean Water Act are defined at 33 CFR part 328. Some wetlands are not subject to Clean Water Act jurisdiction because they do not meet the criteria at Part 328. In its decision in *Solid Waste County of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001), the U.S. Supreme Court ruled that Clean Water Act jurisdiction does not apply to isolated, intrastate, non-navigable waters based on their use as habitat for migratory birds. Tiner (2003) estimated that in some areas of the country, the proportion of wetlands that are geographically isolated, and may not be subject to Clean Water Act jurisdiction is approximately 20 to 50 percent of the wetland area, and there are other areas where more than 50 percent of the wetlands are geographically isolated. Geographically isolated wetlands comprise a substantial proportion of the wetlands found in regions with arid, semi-arid, and semi-humid climates, as well as areas with karst topography (Tiner 2003). However, it is difficult to determine from maps or aerial photographs whether wetlands are hydrologically isolated from other waters, because there may be small surface hydrologic connections that are not included on those maps or detected by those photographs (Tiner 2003).

This NWP authorizes activities in all waters of the United States. These waters are included in the marine, estuarine, palustrine, lacustrine, and riverine systems of the Cowardin classification system.

Wetland functions are the biophysical processes that occur within a wetland (King et al. 2000). Wetlands provide many functions, such as habitat for fish and shellfish, habitat for waterfowl and other wildlife, habitat for rare and endangered species, food production, plant

production, flood conveyance, flood-peak reduction, flood storage, shoreline stabilization, water supply, ground water recharge, pollutant removal, sediment accretion, and nutrient uptake (NRC 1992).

Functions provided by streams include sediment transport, water transport, transport of nutrients and detritus, habitat for many species of plants and animals (including endangered or threatened species), and maintenance of biodiversity (NRC 1992). Streams also provide nutrient cycling functions, food web support, and transport organisms (Allan 1995).

Freshwater ecosystems provide services such as water for drinking, household uses, manufacturing, thermoelectric power generation, irrigation, and aquaculture; production of finfish, waterfowl, and shellfish; and non-extractive services, such as flood control, transportation, recreation (e.g., swimming and boating), pollution dilution, hydroelectric generation, wildlife habitat, soil fertilization, and enhancement of property values (Postel and Carpenter 1997).

Marine ecosystems provide a number of ecosystem services, including fish production; materials cycling (e.g., nitrogen, carbon, oxygen, phosphorous, and sulfur); transformation, detoxification, and sequestration of pollutants and wastes produced by humans; support of ocean-based recreation, tourism, and retirement industries; and coastal land development and valuation, including aesthetics related to living near the ocean (Peterson and Lubchenco 1997).

Activities authorized by this NWP will provide a wide variety of services that are valued by society. Aquatic resource restoration, establishment, and enhancement activities provide ecological functions that provide important services for the health and well-being of human communities. Examples of those services are listed above.

4.0 Environmental Consequences

4.1 General Evaluation Criteria

This document contains a general assessment of the foreseeable effects of the individual activities authorized by this NWP, the anticipated cumulative effects of those activities, and the potential future losses of waters of the United States that are estimated to occur until the expiration date of the NWP. In the assessment of these individual and cumulative effects, the terms and limits of the NWP, notification requirements, and the standard NWP general conditions are considered. The supplementary documentation provided by division engineers will address how regional conditions affect the individual and cumulative effects of the NWP.

The following evaluation comprises the NEPA analysis, the public interest review specified in 33 CFR 320.4(a)(1) and (2), and the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230).

The issuance of an NWP is based on a general assessment of the effects on public interest and environmental factors that are likely to occur as a result of using this NWP to authorize activities in waters of the United States. As such, this assessment must be speculative or predictive in general terms. Since NWPs authorize activities across the nation, projects eligible for NWP authorization may be constructed in a wide variety of environmental settings. Therefore, it is difficult to predict all of the indirect impacts that may be associated with each activity authorized by an NWP. For example, the NWP that authorizes 25 cubic yard discharges of dredged or fill material into waters of the United States may be used to fulfill a variety of project purposes. Indication that a factor is not relevant to a particular NWP does not necessarily mean that the NWP would never have an effect on that factor, but that it is a factor not readily identified with the authorized activity. Factors may be relevant, but the adverse effects on the aquatic environment are negligible, such as the impacts of a boat ramp on water level fluctuations or flood hazards. Only the reasonably foreseeable direct or indirect effects are included in the environmental assessment for this NWP. Division and district engineers will impose, as necessary, additional conditions on the NWP authorization or exercise discretionary authority to address locally important factors or to ensure that the authorized activity results in no more than minimal individual and cumulative adverse effects on the aquatic environment. In any case, adverse effects will be controlled by the terms, conditions, and additional provisions of the NWP. For example, Section 7 Endangered Species Act consultation will be required for activities that may affect endangered or threatened species or critical habitat.

4.2 Impact Analysis

This NWP authorizes activities in all waters of the United States for aquatic resource restoration, establishment, and enhancement activities. There is no acreage limit for this NWP, but the terms of the NWP limit the types of authorized activities.

Pre-construction notification is required for all activities authorized by this NWP, except for: (1) Activities conducted on non-Federal public lands and private lands, in accordance with the terms and conditions of a binding wetland enhancement, restoration, or establishment agreement between the landowner and the U.S. FWS, NRCS, FSA, NMFS, NOS, or their designated state cooperating agencies; (2) Voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) The reclamation of surface coal mine lands, in accordance with an SMCRA permit issued by the OSM or the applicable state agency. The pre-construction notification requirement allows district engineers to review proposed activities on a case-by-case basis to ensure that the adverse effects of those activities on the aquatic environment are minimal. Reporting is required for activities that do not require pre-construction notification. If the district engineer determines that the adverse effects of a particular project are more than minimal after considering mitigation, then discretionary authority will be asserted and the applicant will be notified that another form of DA authorization, such as a regional general permit or individual permit, is required (see 33 CFR 330.4(e) and 330.5).

Additional conditions can be placed on proposed activities on a regional or case-by-case basis to ensure that the work has minimal adverse effects on the aquatic environment. Regional conditioning of this NWP will be used to account for differences in aquatic resource functions, services, and values across the country, ensure that the NWP authorizes only those activities with minimal individual or cumulative adverse effects on the aquatic environment, and allow each Corps district to prioritize its workload based on where its efforts will best serve to protect the aquatic environment. Regional conditions can prohibit the use of an NWP in certain waters (e.g., high value waters or specific types of wetlands or waters), lower notification thresholds, or require notification for all work in certain watersheds or types of waters. Specific NWPs can also be revoked on a geographic or watershed basis where the adverse effects resulting from the use of those NWPs are more than minimal.

In high value waters, division and district engineers can: 1) prohibit the use of the NWP in those waters and require an individual permit or regional general permit; 2) impose an acreage limit on the NWP; 3) require notification for all activities in those waters; 4) add regional conditions to the NWP to ensure that the adverse environmental effects are minimal; or 5) for those activities that require notification, add special conditions to NWP authorizations, such as compensatory mitigation requirements, to ensure that the adverse effects on the aquatic environment are minimal. NWPs can authorize activities in high value waters as long as the individual and cumulative adverse effects on the aquatic environment are minimal.

The construction and use of fills for temporary access for construction may be authorized by NWP 33 or regional general permits issued by division or district engineers. The related work must meet the terms and conditions of the specified permit(s). If the discharge is dependent on portions of a larger project that require an individual permit, this NWP will not apply. [See 33 CFR 330.6(c) and (d)]

4.3 Cumulative Impacts

The cumulative impacts of an NWP generally depends on the number of times the permit is used on a national basis. However, in a specific watershed, division or district engineers may determine that the cumulative adverse effects of activities authorized by NWPs are more than minimal. Division and district engineers will conduct more detailed assessments for geographic areas that are determined to be potentially subject to more than minimal cumulative adverse effects. Division and district engineers have the authority to require individual permits where the cumulative adverse effects are more than minimal, or add conditions to the NWP either on a case-by-case or regional basis to ensure that the cumulative adverse effects are minimal. When division or district engineers determine that a geographic area is subject to more than minimal cumulative adverse effects due to the use of the NWPs, they will use the revocation and modification procedure at 33 CFR 330.5. In reaching the final decision, they will compile information on the cumulative adverse effects and supplement this document.

Based on reported use of this NWP during fiscal year 2003 and the period of July 1, 2005 to June 30, 2006, as well as estimates of unreported use, the Corps estimates that this NWP will be used approximately 1,824 times per year on a national basis, resulting in impacts to approximately 2,517 acres of waters of the United States, including jurisdictional wetlands. The Corps estimates that approximately 5,070 acres of aquatic resource restoration, establishment, and enhancement will result from these activities, offsetting those permitted impacts. The demand for these types of activities could increase or decrease over the five-year duration of this NWP. Using the current trend, approximately 9,120 activities could be authorized over a five year period until this NWP expires, resulting in impacts to approximately 12,585 acres of waters of the United States, including jurisdictional wetlands. Approximately 25,350 acres of aquatic resource restoration, establishment, or enhancement will offset those impacts. The aquatic resource restoration, establishment, and enhancement activities will attenuate the cumulative impacts on the Nation's aquatic resources, so that the net effects on the aquatic environment resulting from the activities authorized by this NWP will be minimal. The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP rather than request individual permits for projects which could result in greater adverse impacts to the aquatic environment.

5.0 Public Interest Review

5.1 Public Interest Review Factors (33 CFR 320.4(a)(1))

For each of the 20 public interest review factors, the extent of the Corps consideration of expected impacts resulting from the use of this NWP is discussed, as well as the reasonably foreseeable cumulative adverse effects that are expected to occur. The Corps decision process involves consideration of the benefits and detriments that may result from the activities authorized by this NWP.

(a) Conservation: The activities authorized by this NWP will improve the natural resource characteristics of the project area through the restoration, enhancement, and establishment of aquatic habitats.

(b) Economics: The activities authorized by this NWP will benefit certain segments of the local economy, especially recreational activities that depend on large populations of fish and wildlife. Aquatic resource restoration, establishment, and enhancement activities will have positive impacts on the local economy. During construction, these activities will generate jobs and revenue for local contractors as well as revenue to building supply companies that sell construction materials. Other facilities associated with these types of activities, such as nature preserves, parks, hunting areas, fishing areas, and hiking trails will provide employment opportunities for the operation and maintenance of these facilities.

(c) Aesthetics: The activities authorized by this NWP may alter the visual character of some

waters of the United States, but usually these alterations will be beneficial. The extent and perception of these changes will vary, depending on the size and configuration of the authorized activity, the nature of the surrounding area, and the public uses of the area. Air quality and noise levels are unlikely to be adversely affected by aquatic resource restoration, establishment, and enhancement activities, except during construction.

(d) General environmental concerns: Activities authorized by this NWP will not adversely affect general environmental concerns, such as water, air, noise, and land pollution, except during construction. The authorized work will improve the physical, chemical, and biological characteristics of the aquatic environment. Adverse effects to the chemical composition of the aquatic environment will be controlled by general condition 6, which states that the material used for construction must be free from toxic pollutants in toxic amounts. Specific environmental concerns are addressed in other sections of this document.

(e) Wetlands: Activities into waters of the United States for aquatic resource restoration, establishment, and enhancement projects may result in the destruction of wetlands. Some non-tidal wetlands may be destroyed as part of a stream restoration or enhancement activity. Non-tidal wetlands may also be destroyed by conversion to another aquatic habitat type, but the same type of wetland (e.g., emergent, scrub-shrub) must be created elsewhere on the project site. The conversion of tidal wetlands is not authorized by this NWP. Some wetlands may be temporarily impacted by the work when used for temporary staging areas and access roads. These wetlands will be restored, but the plant community may be different, especially if the site was originally forested.

Wetlands provide habitat, including foraging, nesting, spawning, rearing, and resting sites for aquatic and terrestrial species. The destruction of wetlands may alter natural drainage patterns. Wetlands reduce erosion by stabilizing the substrate. Wetlands also act as storage areas for stormwater and flood waters. Wetlands may act as groundwater discharge or recharge areas. The loss of wetland vegetation will adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland vegetation also provides habitat for microorganisms that remove nutrients and pollutants from water. Wetlands, through the accumulation of organic matter, act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water.

Division engineers can regionally condition this NWP to restrict or prohibit its use in high value non-tidal wetlands. General condition 19 requires submittal of a pre-construction notification prior to use of this NWP in designated critical resource waters and adjacent wetlands, which may include high value wetlands. District engineers will also exercise discretionary authority to require an individual permit if the affected wetlands are high value and the work will result in more than minimal adverse effects on the aquatic environment. District engineers can also add case-specific special conditions to the NWP authorization to reduce impacts to wetlands.

(f) Historic properties: General condition 18 states that in cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act have been satisfied.

(g) Fish and wildlife values: This NWP authorizes activities that restore, establish, or enhance aquatic habitat for many species of fish and wildlife. Activities authorized by this NWP may alter the habitat characteristics of streams and wetlands, favoring certain species at the expense of other species. Wetland and riparian vegetation provides food and habitat for many species, including foraging areas, resting areas, corridors for wildlife movement, and nesting and breeding grounds. Open waters provide habitat for fish and other aquatic organisms. Fish and other motile animals will avoid the project site during construction. Woody riparian vegetation shades streams, which reduces water temperature fluctuations and provides habitat for fish and other aquatic animals. Riparian vegetation provides organic matter that is consumed by fish and aquatic invertebrates. Woody riparian vegetation creates habitat diversity in streams when trees and large shrubs fall into the channel, forming snags that provide habitat and shade for fish. The morphology of a stream channel may be altered by activities authorized by this NWP, which can affect fish populations, but such changes should improve the quality of aquatic habitat. The project proponent may remove invasive non-native plant species to improve the quality of fish and wildlife habitat. If the site is to be planted by the project proponent, only native species should be planted. For those projects that require notification, the district engineer will have an opportunity to review the proposed work and assess potential impacts on fish and wildlife values to ensure that the authorized activity results in minimal adverse effects on the aquatic environment.

General condition 2 will reduce the adverse effects to fish and other aquatic species by prohibiting activities that substantially disrupt the movement of indigenous aquatic species, unless the primary purpose of the activity is to impound water. Compliance with general conditions 3 and 5 will ensure that the authorized work has minimal adverse effects on spawning areas and shellfish beds, respectively. The authorized work cannot have more than minimal adverse effects on breeding areas for migratory birds, due to the requirements of general condition 4.

Consultation pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act will occur as necessary for proposed NWP activities that may adversely affect essential fish habitat. Consultation may occur on a case-by-case or programmatic basis. Division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in minimal adverse effects on essential fish habitat.

(h) Flood hazards: The activities authorized by this NWP are unlikely to adversely affect the flood-holding capacity of 100-year floodplains. Compliance with general condition 9 will also reduce flood hazards. This general condition requires the permittee to maintain, to the maximum extent practicable, the pre-construction course, condition, capacity, and location

of open waters, except under certain circumstances.

(i) Floodplain values: Activities authorized by this NWP may affect floodplain values by changing plant communities, substrate, and elevations. In most cases, these changes will be beneficial to the aquatic environment. The flood-holding capacity of the floodplain is unlikely to be adversely affected by the activities authorized by this NWP. Some of the activities authorized by this NWP may be designed to increase the frequency of flooding to improve local water quality and benefit certain organisms that depend on flooding patterns as part of their life cycles. The fish and wildlife habitat values of floodplains may be adversely affected by activities authorized by this NWP, by modifying or eliminating areas used for nesting, foraging, resting, and reproduction by certain species of wildlife. The water quality functions of floodplains may also be altered by these activities. Modification of the floodplain may also affect other hydrological processes, such as groundwater recharge.

The stream and wetland restoration activities authorized by this NWP will have only minor adverse effects on floodplain values. General condition 20 requires avoidance and minimization of impacts to waters of the United States to the maximum extent practicable at the project site, which will reduce losses of floodplain values. The mitigation requirements of this general condition will ensure that the adverse effects of these activities on floodplain values are minimal. Compliance with general condition 9 will ensure that activities on floodplains will not cause more than minimal adverse effects on floodplain values, especially flood storage and conveyance.

(j) Land use: Activities authorized by this NWP will retain the natural land use of the project area. Conservation easements, deed restrictions, or other agreements to maintain the aquatic habitats on the property, including riparian areas, may be required as a condition of this NWP. Since the primary responsibility for land use decisions is held by state, local, and Tribal governments, the Corps scope of review is limited to significant issues of overriding national importance, such as navigation and water quality (see 33 CFR 320.4(j)(2)).

(k) Navigation: Activities authorized by this NWP will not adversely affect navigation, because these activities must comply with general condition 1. The pre-construction notification requirements and reported activities will allow district engineers to review the proposed work and assess the potential adverse effects on navigation. If there are navigation concerns, then the district engineer can exercise discretionary authority and require an individual permit for the proposed work.

(l) Shore erosion and accretion: The activities authorized by this NWP may affect shore erosion and accretion processes, if they are constructed in coastal areas. These activities are likely to have minor adverse effects on shore erosion and accretion. The restoration, enhancement, or establishment of wetlands in coastal areas will stabilize sediments and improve water quality. Some bank protection may be necessary to protect the wetlands that are restored, enhanced, or established along the shore.

(m) Recreation: Activities authorized by this NWP may change the recreational uses of the area. Certain recreational activities, such as bird watching, hunting, and fishing may be improved by providing habitat for species that attract bird watchers, hunters, and fishermen. Some aquatic resource restoration, establishment, or enhancement activities may eliminate certain recreational uses of the area, especially of the landowner restricts access to the area. Overall, the activities authorized by this NWP will benefit certain recreational uses of the area.

(n) Water supply and conservation: Activities authorized by this NWP may affect both surface water and groundwater supplies. Surface water supplies may be increased through the construction of impoundments. Groundwater recharge may be improved by wetland restoration, establishment, or enhancement activities. The activities authorized by this NWP are likely to enhance water supplies by improving local water quality. General condition 7 prohibits discharges in the vicinity of public water supply intakes.

(o) Water quality: The activities authorized by this NWP will improve water quality. These activities will increase the quantity and quality of wetlands, riparian areas, and streams in the watershed. The establishment and maintenance of wetland and riparian vegetation will improve water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland and riparian vegetation also provides habitat for microorganisms that remove nutrients and pollutants from water. Wetlands, through the accumulation of organic matter, act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water column. Wetlands and riparian areas also decrease the velocity of flood waters, removing suspended sediments from the water column and reducing turbidity. Riparian vegetation also serves an important role in the water quality of streams by shading the water from the intense heat of the sun.

During construction, small amounts of oil and grease from construction equipment may be discharged into the waterway. Because most of the construction will occur during a relatively short period of time, the frequency and concentration of these discharges are not expected to have more than minimal adverse effects on overall water quality. This NWP requires Section 401 water quality certification, since it authorizes discharges of dredged or fill material into waters of the United States. Most water quality concerns are addressed by the state or Tribal Section 401 agency.

(p) Energy needs: During construction, the activities authorized by this NWP will temporarily increase energy consumption in the area, but adverse effects to energy needs will be negligible.

(q) Safety: The activities authorized by this NWP will be subject to Federal, state, and local safety laws and regulations. Therefore, this NWP will not adversely affect the safety of the project area.

(r) Food and fiber production: Activities authorized by this NWP may adversely affect food and fiber production, especially where wetland restoration, establishment, or enhancement

projects are conducted on land used for agricultural production. Stream restoration and enhancement activities may also decrease the amount of farmland, if, for example, a riparian zone is established along a stream that runs through cropland. The loss of farmland is more appropriately addressed through the land use planning and zoning authority held by state and local governments. Some aquatic habitat restoration, establishment, and enhancement activities may increase populations of economically important game species, which provide food for some citizens.

(s) Mineral needs: Activities authorized by this NWP may increase demand for aggregates and stone, which may be used to construct the aquatic resource restoration, establishment, or enhancement project. The activities authorized by this NWP will have negligible adverse effects on the demand for other building materials, such as steel, aluminum, and copper, which are made from mineral ores.

(t) Considerations of property ownership: The NWP complies with 33 CFR 320.4(g), which states that an inherent aspect of property ownership is a right to reasonable private use. The NWP provides expedited DA authorization for aquatic resource restoration, establishment, and enhancement activities, provided the activity complies with the terms and conditions of the NWP and results in minimal adverse effects on the aquatic environment.

5.2 Additional Public Interest Review Factors (33 CFR 320.4(a)(2))

5.2.1 Relative extent of the public and private need for the proposed structure or work

This NWP authorizes work in all waters of the United States, including discharges of dredged or fill material, for aquatic resource restoration, establishment, and enhancement activities that have minimal adverse effects on the aquatic environment, individually and cumulatively. These activities satisfy public and private needs for aquatic resource functions, services, and values. The need for this NWP is based upon the large number of these activities that occur annually with minimal adverse effects on the aquatic environment.

5.2.2 Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work

Most situations in which there are unresolved conflicts concerning resource use arise when environmentally sensitive areas are involved (e.g., special aquatic sites, including wetlands) or where there are competing uses of a resource. The nature and scope of the activity, when planned and constructed in accordance with the terms and conditions of this NWP, reduce the likelihood of such conflict. In the event that there is a conflict, the NWP contains provisions that are capable of resolving the matter (see Section 1.2 of this document).

General condition 20 requires permittees to avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site. Consideration of off-site alternative locations is not required for activities that are authorized by general

permits. General permits authorize activities that have minimal individual and cumulative adverse effects on the aquatic environment and overall public interest. District engineers will exercise discretionary authority and require an individual permit if the proposed work will result in more than minimal adverse environmental effects on the project site. The consideration of off-site alternatives can be required during the individual permit process.

5.2.3 The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited

The nature and scope of the work authorized by the NWP will most likely restrict the extent of the beneficial and detrimental effects to the area immediately surrounding the aquatic resource restoration, establishment, or enhancement activity. Activities authorized by this NWP will have minimal adverse effects on the aquatic environment.

The terms, conditions, and provisions of the NWP were developed to ensure that individual and cumulative adverse environmental effects are minimal. Specifically, NWPs do not obviate the need for the permittee to obtain other Federal, state, or local authorizations required by law. The NWPs do not grant any property rights or exclusive privileges (see 33 CFR 330.4(b) for further information). Additional conditions, limitations, restrictions, and provisions for discretionary authority, as well as the ability to add activity-specific or regional conditions to this NWP, will provide further safeguards to the aquatic environment and the overall public interest. There are also provisions to allow suspension, modification, or revocation of the NWP.

6.0 Clean Water Act Section 404(b)(1) Guidelines Analysis

The 404(b)(1) compliance criteria for general permits are provided at 40 CFR 230.7.

6.1 Evaluation Process (40 CFR 230.7(b))

6.1.1 Alternatives (40 CFR 230.10(a))

General condition 20 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. The consideration of off-site alternatives is not directly applicable to general permits.

6.1.2 Prohibitions (40 CFR 230.10(b))

This NWP authorizes discharges of dredged or fill material into waters of the United States, which require water quality certification. Water quality certification requirements will be met in accordance with the procedures at 33 CFR 330.4(c).

No toxic discharges will be authorized by this NWP. General condition 6 states that the

material must be free from toxic pollutants in toxic amounts.

This NWP does not authorize activities that jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of critical habitat. Reviews of preconstruction notifications, regional conditions, and local operating procedures for endangered species will ensure compliance with the Endangered Species Act. Refer to general condition 17 and to 33 CFR 330.4(f) for information and procedures.

This NWP will not authorize the violation of any requirement to protect any marine sanctuary. Refer to section 6.2.3(j)(1) of this document for further information.

6.1.3 Findings of Significant Degradation (40 CFR 230.10(c))

Potential impact analysis (Subparts C through F): The potential impact analysis specified in Subparts C through F is discussed in section 6.2.3 of this document. Mitigation required by the district engineer will ensure that the adverse effects on the aquatic environment are minimal.

Evaluation and testing (Subpart G): Because the terms and conditions of the NWP specify the types of discharges that are authorized, as well as those that are prohibited, individual evaluation and testing for the presence of contaminants will normally not be required. If a situation warrants, provisions of the NWP allow division or district engineers to further specify authorized or prohibited discharges and/or require testing.

Based upon Subparts B and G, after consideration of Subparts C through F, the discharges authorized by this NWP will not cause or contribute to significant degradation of waters of the United States.

6.1.4 Factual determinations (40 CFR 230.11)

The factual determinations required in 40 CFR 230.11 are discussed in section 6.2.3 of this document.

6.1.5 Appropriate and practicable steps to minimize potential adverse impacts (40 CFR 230.10(d))

As demonstrated by the information in this document, as well as the terms, conditions, and provisions of this NWP, actions to minimize adverse effects (Subpart H) have been thoroughly considered and incorporated into the NWP. General condition 20 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. Compensatory mitigation required by the district engineer will ensure that the net adverse effects on the aquatic environment are minimal.

6.2 Evaluation Process (40 CFR 230.7(b))

6.2.1 Description of permitted activities (40 CFR 230.7(b)(2))

As indicated by the text of this NWP in section 1.0 of this document, and the discussion of potential impacts in section 4.0, the activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization under a single general permit. Specifically, the purpose of the NWP is to authorize discharges of dredged or fill material for aquatic resource restoration, establishment, and enhancement activities. The nature and scope of the impacts are controlled by the terms and conditions of the NWP.

The activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization by a general permit. The terms of the NWP authorize a specific category of activity (i.e., discharges of dredged or fill material for aquatic resource restoration, establishment, and enhancement activities) in a specific category of waters (i.e., waters of the United States). The restrictions imposed by the terms and conditions of this NWP will result in the authorization of activities that have similar impacts on the aquatic environment, namely aquatic resource restoration, establishment, and enhancement activities.

If a situation arises in which the activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

6.2.2 Cumulative effects (40 CFR 230.7(b)(3))

The cumulative effects, including the number of activities likely to be authorized under this NWP, are discussed in section 4.3 of this document. If a situation arises in which the proposed activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

6.2.3 Section 404(b)(1) Guidelines Impact Analysis, Subparts C through F

(a) Substrate: Discharges of dredged or fill material into waters of the United States will result in minor changes to the substrate of those waters, since the NWP authorizes activities that restore, establish, or enhance aquatic habitats. There will be beneficial changes to the physical, chemical, and biological characteristics of the substrate. The original substrate may be removed and replaced with material that will improve the growth and reproduction of vegetation or improve the aquatic habitat characteristics of the area. Temporary fills may be placed upon the substrate, but must be removed upon completion of the work (see general condition 13). Some erosion may occur during construction, but general condition 12 requires the use of appropriate measures to control soil erosion and sediment.

(b) Suspended particulates/turbidity: Depending on the method of construction, soil erosion and sediment control measures, equipment, composition of the bottom substrate, and wind and current conditions during construction, fill material placed in open waters will temporarily increase water turbidity. Particulates will be resuspended in the water column during removal of temporary fills. The turbidity plume will normally be limited to the immediate vicinity of the disturbance and should dissipate shortly after each phase of the construction activity. General condition 12 requires the permittee to stabilize exposed soils and other fills, which will reduce turbidity. In many localities, sediment and erosion control plans are required to minimize the entry of soil into the aquatic environment. NWP activities cannot create turbidity plumes that smother important spawning areas downstream (see general condition 3).

(c) Water: The activities authorized by this NWP can affect some characteristics of water, such as water clarity, chemical content, dissolved gas concentrations, pH, and temperature, but these effects are likely to be positive, with benefits to the local aquatic environment. The chemical and physical characteristics of the waterbody may be changed by aquatic habitat restoration, establishment, or enhancement activities, but such changes should be improvements or negligible adverse effects. Changes in water quality can affect the species and quantities of organisms inhabiting the aquatic area. Water quality certification is required for activities authorized by this NWP, which will ensure that the work does not violate applicable water quality standards. The establishment of riparian vegetation will help improve or maintain water quality, by removing nutrients, moderating water temperature changes, and trapping sediments.

(d) Current patterns and water circulation: Activities authorized by this NWP may adversely affect the movement of water in the aquatic environment. Since certain activities authorized by this NWP require pre-construction notification and others require reporting, the district engineer will have an opportunity to review the proposed work and assess potential impacts on current patterns and water circulation. The installation of water control structures and habitat features may affect current patterns and water circulation, but the adverse effects are likely to be minor. General condition 9 requires the authorized activity to be designed to withstand expected high flows and to maintain the course, condition, capacity, and location of open waters to the maximum extent practicable.

(e) Normal water level fluctuations: The activities authorized by this NWP will have negligible adverse effects on normal water level fluctuations. Some activities may involve the construction of water control structures, which will alter the water level fluctuations of non-tidal waters. This NWP does not authorize the conversion of tidal waters to other aquatic uses, which will prevent adverse effects to tidal fluctuations in the area. General condition 9 requires the permittee to maintain the pre-construction course, condition, capacity, and location of open waters, to the maximum extent practicable.

(f) Salinity gradients: The activities authorized by this NWP are unlikely to adversely affect salinity gradients, since the NWP authorizes the restoration, establishment, or enhancement of aquatic resources, but does not authorize the relocation or conversion of tidal waters.

These activities will not cause changes to salinity gradients.

(g) Threatened and endangered species: The Corps believes that the procedures currently in place result in proper coordination under Section 7 of the Endangered Species Act (ESA) and ensure that activities authorized by this NWP will not jeopardize the continued existence or any listed threatened and endangered species or result in the destruction or adverse modification of critical habitat. The Corps also believes that current local procedures in Corps districts are effective in ensuring compliance with ESA.

Under general condition 17, no activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

Each activity authorized by an NWP is subject to general condition 17, which states that "[n]o activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species." In addition, general condition 17 explicitly states that the NWP does not authorize the taking of threatened or endangered species, which will ensure that permittees do not mistake the NWP authorization as a Federal authorization to take threatened or endangered species. General condition 17 also requires non-federal permittees to notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat. This general condition also states that, in such cases, non-federal permittees shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized.

Under the current Corps regulations (33 CFR 325.2(b)(5)), the district engineer must review all permit applications for potential impacts on threatened and endangered species or critical habitat. For the NWP program, this review occurs when the district engineer evaluates the pre-construction notification or request for verification. Based on the evaluation of all available information, the district engineer will initiate consultation with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS), as appropriate, if he or she determines that the regulated activity may affect any threatened and endangered species or critical habitat. Consultation may occur during the NWP authorization process or the district engineer may exercise discretionary authority to require an individual permit for the proposed activity and initiate consultation through the individual permit process. If ESA consultation is conducted during the NWP authorization process without the district engineer exercising discretionary authority, then the applicant will be notified that he or she cannot proceed with the proposed activity until ESA consultation is complete. If the district engineer determines that the activity will have no effect on any threatened and endangered species or critical habitat, then the district engineer will notify the applicant that he or she may proceed under the NWP authorization.

Corps districts have, in most cases, established informal or formal procedures with local offices of the USFWS and NMFS, through which the agencies share information regarding threatened and endangered species and their critical habitat. This information helps district engineers determine if a proposed activity may affect endangered species or their critical habitat and, if necessary, initiate consultation. Corps districts may utilize maps or databases that identify locations of populations of threatened and endangered species and their critical habitat. Where necessary, regional conditions are added to NWPs to require notification for activities that occur in known locations of threatened and endangered species or critical habitat. For activities that require agency coordination during the pre-construction notification process, the USFWS and NMFS will review the proposed work for potential impacts to threatened and endangered species and their critical habitat. Any information provided by local maps and databases and any comments received during the pre-construction notification review process will be used by the district engineer to make a "no effect" or "may affect" decision.

Based on the safeguards discussed above, especially general condition 17 and the NWP regulations at 33 CFR 330.5(f), the Corps has determined that the activities authorized by this NWP will not jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitat. Although the Corps continues to believe that these procedures ensure compliance with ESA, the Corps has taken some steps to provide further assurance. Corps district offices have met with local representatives of the USFWS and NMFS to establish or modify existing procedures, where necessary, to ensure that the Corps has the latest information regarding the existence and location of any threatened or endangered species or their critical habitat. Corps districts can also establish, through local procedures or other means, additional safeguards that ensure compliance with ESA. Through formal consultation under Section 7 of the Endangered Species Act, or through other coordination with the USFWS and/or the NMFS, as appropriate, the Corps will establish procedures to ensure that the NWP will not jeopardize any threatened and endangered species or result in the destruction or adverse modification of designated critical habitat. Such procedures may result in the development of regional conditions added to the NWP by the division engineer, or in special conditions to be added to an NWP authorization by the district engineer.

(h) Fish, crustaceans, molluscs, and other aquatic organisms in the food web. The activities authorized by this NWP will benefit most species of fish, crustaceans, molluscs, and other aquatic organisms in the food web. Some species may be adversely affected by changes in habitat characteristics that may occur as a result of activities authorized by this NWP. These activities will increase or improve the habitat for these species, which will increase populations of those organisms. Certain activities require pre-construction notification and others require reporting; therefore the district engineer will review the proposed work and assess potential impacts on fish and other aquatic organisms and ensure that those impacts are minimal. Fish and other motile animals will avoid the project site during construction. Sessile or slow-moving animals in the path of discharges, equipment, and building materials will be destroyed. Some aquatic animals may be smothered by the placement of fill material. Motile animals will return to those areas that are temporarily impacted by the work

and restored or allowed to revert back to pre-construction conditions. Benthic and sessile animals are expected to recolonize sites after construction. Activities that alter the riparian zone, especially floodplains, may adversely affect populations of fish and other aquatic animals, by altering stream flow, flooding patterns, and surface and groundwater hydrology. The activities authorized by this NWP may favor certain riparian species at the detriment of other riparian species. Some species of fish spawn on floodplains, which could be prevented if the authorized work causes substantial adverse changes to floodplain habitat. The removal of invasive non-native plant species will benefit aquatic organisms in the food web.

Division and district engineers can place conditions on this NWP to prohibit discharges during important stages of the life cycles of certain aquatic organisms. Such time of year restrictions can prevent adverse effects to these aquatic organisms during reproduction and development periods. General conditions 3 and 5 address protection of spawning areas and shellfish beds, respectively. General condition 3 states that activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. In addition, general condition 3 also prohibits activities that result in the physical destruction of important spawning areas. General condition 5 prohibits activities in areas of concentrated shellfish populations. General condition 9 requires the maintenance of pre-construction course, condition, capacity, and location of open waters to the maximum extent practicable, which will help minimize adverse impacts to fish, shellfish, and other aquatic organisms in the food web.

(i) Other wildlife: Activities authorized by this NWP will benefit other wildlife associated with aquatic ecosystems, such as resident and transient mammals, birds, reptiles, and amphibians, through the restoration, establishment, or enhancement of aquatic habitat, including breeding and nesting areas, escape cover, travel corridors, and preferred food sources. However, certain species may benefit from these changes while other species may be displaced by the destruction of specialized habitat. This NWP does not authorize activities that jeopardize the continued existence of Federally-listed endangered and threatened species or result in the destruction or adverse modification of critical habitat. General condition 4 states that activities in breeding areas for migratory birds must be avoided to the maximum extent practicable.

(j) Special aquatic sites: The potential impacts to specific special aquatic sites are discussed below:

(1) Sanctuaries and refuges: The activities authorized by this NWP will have minimal adverse effects on waters of the United States within sanctuaries or refuges designated by Federal or state laws or local ordinances. General condition 19 requires submittal of a pre-construction notification prior to the use of this NWP in NOAA-designated marine sanctuaries, National Estuarine Research Reserves, coral reefs, state natural heritage sites, and outstanding national resource waters. District engineers will exercise discretionary authority and require individual permits for specific projects in waters of the United States in sanctuaries and refuges if those activities will result in more than minimal adverse effects on the aquatic environment.

(2) Wetlands: The activities authorized by this NWP will have beneficial effects on wetlands. The quantity and quality of wetlands in a watershed will be improved by the activities authorized by this NWP. District engineers will review pre-construction notifications and reported activities to ensure that the adverse effects on the aquatic environment are minimal. Division engineers can regionally condition this NWP to restrict or prohibit its use in certain high value wetlands. See paragraph (e) of section 5.1 for a more detailed discussion of impacts to wetlands.

(3) Mud flats: The activities authorized by this NWP may result in the loss of mud flats if tidal wetlands are created or restored where mud flats are located. Such adverse effects are likely to be minor. Pre-construction notification or reporting is required for all activities authorized by this NWP, and the district engineer will have an opportunity to review the proposed work and determine if the adverse effects on the aquatic environment are minimal.

(4) Vegetated shallows: The activities authorized by this NWP may affect vegetated shallows in non-tidal waters, if the project proponent wants to change aquatic habitat types in those areas. This NWP does not authorize the conversion of tidal waters to other aquatic uses. For those activities that require notification, the district engineer will have an opportunity to review the proposed work and assess potential impacts on vegetated shallows and ensure that the adverse effects are minimal. Division engineers can also regionally condition this NWP to prohibit conversion of non-tidal vegetated shallows.

(5) Coral reefs: The activities authorized by this NWP will have minimal adverse effects on coral reefs, since the NWP does not authorize the conversion of tidal waters to other uses.

(6) Riffle and pool complexes: Stream restoration and enhancement activities authorized by this NWP may affect riffle and pool complexes, but the adverse effects will be minimal since stream restoration and enhancement activities improve habitat characteristics. The district engineer will review pre-construction notifications and reported activities to determine if proposed activities will result in minimal adverse effects on the aquatic environment. If the riffle and pool complexes are high value and the work will result in more than minimal adverse effects on the aquatic environment, the district engineer will exercise discretionary authority to require the project proponent to obtain an individual permit.

(k) Municipal and private water supplies: See paragraph (n) of section 5.1 for a discussion of potential impacts to water supplies.

(l) Recreational and commercial fisheries, including essential fish habitat: The activities authorized by this NWP may adversely affect waters of the United States that act as habitat for populations of economically important fish and shellfish species. Division and district engineers can condition this NWP to prohibit discharges during important life cycle stages,

such as spawning or development periods, of economically valuable fish and shellfish. In response to a pre-construction notification, the district engineer which will review the activity to ensure that adverse effects to economically important fish and shellfish are minimal. Compliance with general conditions 3 and 5 will ensure that the authorized work does not adversely affect important spawning areas or concentrated shellfish populations. As discussed in paragraph (g) of section 5.1, there are procedures to help ensure that impacts to essential fish habitat are minimal, individually or cumulatively. For example, division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in minimal adverse effects on essential fish habitat.

(m) Water-related recreation: See paragraph (m) of section 5.1 above.

(n) Aesthetics: See paragraph (c) of section 5.1 above.

(o) Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar areas: General condition 19 requires submittal of a pre-construction notification prior to the use of this NWP in designated critical resource waters and adjacent wetlands, which may be located in parks, national and historical monuments, national seashores, wilderness areas, and research sites. This NWP can be used to authorize activities in parks, national and historical monuments, national seashores, wilderness areas, and research sites if the manager or caretaker wants to conduct work in waters of the United States and those activities result in minimal adverse effects on the aquatic environment. Division engineers can regionally condition the NWP to prohibit its use in designated areas, such as national wildlife refuges or wilderness areas.

7.0 Determinations

7.1 Finding of No Significant Impact

Based on the information in this document, the Corps has determined that the issuance of this NWP will not have a significant impact on the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement is not required.

7.2 Public Interest Determination

In accordance with the requirements of 33 CFR 320.4, the Corps has determined, based on the information in this document, that the issuance of this NWP is not contrary to the public interest.

7.3 Section 404(b)(1) Guidelines Compliance

This NWP has been evaluated for compliance with the 404(b)(1) Guidelines, including Subparts C through G. Based on the information in this document, the Corps has determined that the discharges authorized by this NWP comply with the 404(b)(1)

Guidelines, with the inclusion of appropriate and practicable conditions, including mitigation, necessary to minimize adverse effects on affected aquatic ecosystems. The activities authorized by this NWP will not result in significant degradation of the aquatic environment.

7.4 Section 176(c) of the Clean Air Act General Conformity Rule Review

This NWP has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities authorized by this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this NWP.

FOR THE COMMANDER

Dated: MAR - 1 2007

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